

RANGE EXTENSIONS OF DECAPOD CRUSTACEANS FROM BAHIA TORTUGAS AND VICINITY, BAJA CALIFORNIA SUR, MEXICO

Decapod crustaceans are the most common invertebrates in the intertidal area of the Baja California (BC) coast. Despite their abundance, some common species are poorly known because their microhabitat, which includes burrows, crevices, and tide pools, has not been carefully examined. As a result of collections at Bahía Tortugas, Baja California Sur (BCS) (lat 27°39'N, long 114°54'W) and vicinity we obtained new distributional and ecological information for 10 species and subspecies of decapods. A mixture of temperate and warm-water decapods was found. This agrees with Brusca and Wallerstein (1979), who conclude that Bahía Tortugas may be considered as the northernmost significant refugium for tropical-subtropical fauna. The material has been included in the invertebrate collection of the Escuela Superior de Ciencias, Universidad Autónoma de Baja California (UABC). Other specimens were examined from the collection of Crustacea, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE). Additional records, provided to us by Dr. John S. Garth, are based on material from the Allan Hancock Foundation (AHF), University of Southern California, Los Angeles, from collections made primarily by the "VELERO IV", "SEACHER", and the "Kenyon-Williams" expedition.

Family Porcellanidae

Petrolisthes rathbunae Schmitt, 1921

Previous recorded range.—Monterey Bay to Laguna Beach, California; Santa Barbara Island, California; Isla Guadalupe, Baja California (Haig 1960).

Material examined.—One male, one female, Bahía Tortugas, BCS, 14 April 1987, E. and A.R. Campos, colls., UABC.

Remarks.—This is the first record of this porcellanid crab for the Baja California peninsula. It was collected on sandy-mud and gravel beneath stones, middle intertidal.

Family Grapsidae

Hemigrapsus oregonensis (Dana, 1851)

Previous recorded range.—Resurrection Bay, Alaska, to Bahía Todos Santos, Baja California (Garth and Abbott 1980).

Material examined.—One ovigerous female, Black Warrior (Guerrero Negro) Lagoon, BC (lat 28°00'N, long 114°08'W), 21 March 1956, J.D. Soule and W.K. Emerson, colls., AHF. Two females, one male, Bahía Tortugas, BCS, January–April 1987, E. and A.R. Campos, colls., UABC. Number and sex not stated, Bahía San Juanico, BCS (lat 26°12'N, long 112°28'W), 8 February 1955, J.W. Knudsen, colls., AHF.

Remarks.—This species is uncommon along the rocky intertidal of Bahía Tortugas.

Family Xanthidae

Cataleptodius occidentalis (Stimpson, 1871)

Previous recorded range.—Gulf of California, to Manzanillo, Colima and Galapagos Islands; West Baja California, North to San Ignacio Lagoon (Garth 1960; Brusca 1980).

Material examined.—Two specimens, Bahía Magdalena, BCS (lat 24°45'N, long 112°00'W), 30 October 1971, "SEACHER" station 285, AHF. Six males, 12 females, northern shore, Bahía San Juanico, 7 February 1955, J.K. Knudsen, coll., AHF. One female, northern Whale Islands, Laguna de San Ignacio, BCS (lat 26°39'N, long 113°15'W), 8 February 1950, C.L. Hubbs, M.N. Johnson and A.A. Allanson, colls., AHF. Two males, Bahía Tortugas, BCS, 14 April 1987, E. and A.R. Campos, colls., UABC.

Remarks.—Because this species has been commonly known as *Leptodius occidentalis* we referred to Guinot (1967), who named the genus *Cataleptodius* and discussed its distinction from *Leptodius sensu stricto*.

Lophopanopeus leucomanus leucomanus (Lockington, 1877)

Previous recorded range.—Carmel, Monterey Co., California, to Rosarito, BC (Menzies 1948).

Material examined.—Three males, two females (one ovigerous), Bahía Todos Santos, BC, 30 April 1980, R. Olson, coll., CICESE. Two males, one female, Isla Cedros, BC (lat 28°05'N, long 115°20'W), 31 December 1986, G. Jimenez-Beede, coll., UABC.

Remarks.—The carapace and pereopods (thoracic appendages) of our specimens fit the description given by Menzies (1948) for this subspecies. However, we found differences in the gonopods (abdominal appendages), primarily the single medial spine (S-1) (Menzies 1948, Figure 9). According to Menzies the S-1 forms an angle of 45° with the shaft, but in our specimens from Isla Cedros the S-1 extends from the shaft at an acute angle. Specimens from Isla Cedros were collected in an unprotected rocky coast on sandy-gravel bottom.

Lophopanopeus bellus diegensis (Rathbun, 1900)

Previous recorded range.—Monterey Bay to Mission Bay, California; Alaska and Washington (extralimital) (Menzies 1948).

Material examined.—One male, one female, Bahía Todos Santos, BC, 15 February 1980, R. Bonfil, coll., CICESE. Two males, Isla Cedros, BC, "Kenyon-Williams" expedition, 12 May 1946, AHF. One female, Isla Cedros, BC, 14 May 1946, AHF. Six males, four females, 3.5 mi N of Isla Natividad light, BC (lat 27°55'N, long 115°15'W), 19–20 fm, "VELERO-IV" station 1706–49, 16 March 1949, AHF. One male, off Cape Tortolo, BCS (lat 27°37'N, long 114°52'W), 1–4 fm, "VELERO-IV" STATION 1707–49, 6 March 1946, AHF.

Lophopanopeus bellus bellus (Stimpson, 1860)

Previous recorded range.—Resurrection Bay, Alaska to Cayucos, San Luis Obispo Co., California (Menzies 1948).

Material examined.—One female, Bahía Tortugas, BCS, 4 January 1987, E. and A.R. Campos, colls., UABC.

Remarks.—Despite the fact that this subspecies has only been recorded north of Cayucos, our female specimen agrees with the description given by

Menzies (1948). The carpus of the walking legs is not markedly bilobed and the carpus of the chelipeds, although showing a strong degree of rugosity on its dorsal surface, does not have the isolated, elevated and irregular bumps that are characteristics of *L. b. diegensis*.

Family Ocypodidae.

Uca (Leptuca) latimanus (Rathbun, 1983)

Previous recorded range.—Puerto Peñasco, Sonora, to Puerto Bolivar, Ecuador (Crane 1975, Hendrickx 1979, Brusca 1980).

Material examined.—Nine males, three females, Los Bungalos, Bahía Tortugas, BCS (lat 27°41'N, long 114°52'W), April–June 1987, E. and A.R. Campos, colls., UABC.

Remarks.—see below.

Uca (Leptuca) musica musica Rathbun, 1914

Previous recorded range.—San Felipe, BC, to La Paz, BCS, and Guaymas, Sonora, to San Blas, Nayarit; West coast of Baja California, north to Bahía Magdalena (Crane 1975, Hendrickx 1984).

Material examined.—150 males and 80 females, Puertecitos, km 72 road San Felipe-San Luis Gonzaga (lat 30°30'N, long 114°40'W), July–September 1986, E. Campos and G. Lopez, colls., UABC. One male, 13 females, Los Bungalos, Bahía Tortugas, BCS, 10 August 1987, E. and A.R. Campos, colls., UABC.

Remarks.—In Bahía Tortugas, both *U. latimanus* and *U. m. musica* were collected on the shore of a semi-enclosed coastal lake, which is temporarily connected to the sea during spring tides. The habitat here is muddy sandflats.

Family Callianassidae

Callianassa affinis Holmes, 1900

Previous recorded range.—Goleta, Santa Barbara Co., California, to Bahía San Quintín, BC (Haig and Abbott 1980).

Material examined.—Five males and four females, Bahía Tortugas, BCS, January–April 1987, E. and A.R. Campos, colls., UABC. Nine males, eight females, Isla Cedros, 1 January 1987, G. Jimenez-Beede, coll., UABC.

Family Upogebidae.

Upogebia macginitieorum Williams, 1986

Previous recorded range.—Santa Catalina Island, Newport Bay, California, to Tijuana Slough (San Diego), California (Williams 1986).

Material examined.—Six females, Punta Morro, Bahía Todos Santos, BC, February–June, 1985, J.R. Campoy-Favela and E. Campos, colls., UABC. 28 males, 21 females (one ovigerous), and seven juveniles, Bahía Tortugas, BCS, January–April 1987, E. and A.R. Campos, colls., UABC.

Remarks.—The morphology of our specimens is almost identical to that of the holotype described by Williams (1986). The habitat recorded for this species is mud and clay banks (Homziak 1981, Williams 1986). In Baja California this species builds burrows in sandy gravel and sandy-muddy gravel, between and beneath boulders. This habitat is similar to that of *C. affinis*, with which *U. macginitieorum* co-occurs. In Bahía Todos Santos *U. macginitieorum* is parasitized by the bopyrid *Phyllodurus abdominalis* and by an undescribed

species of *Pseudione* in Bahía Tortugas (Campos-González and Campoy-Favela 1988, Campos and Campos, in press).

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